Number of books/chapters/edited volumes/books published and papers published National/ International conference proceedings per teacher during AY 2020.

Sr. No	Name of Author/s.	Title of the Paper/Book.	Publication
1	Prof. Vivekanand Gaikwad	Innovative and Emerging trends in Human Resource Management	Sinhgad Institute of Management and Computer Applications
2	Dr. Sarang A. Dani	Enablers And Inhibitors Of Industry 4.0 With Special Reference To Auto Ancillary Industry Based In Pune Region.	Sinhgad Technical Education Society's Sinhgad Institute Of Management And Computer Application (SIMCA)

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Innovative and Emerging trends in Human Resource Management

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Abstract

The industrial sectors are changing rapidly because of their expectations and requirement, these changes are implementing very fast in various areas like; technology, economy, psychological understanding and so on. Latest theories and models suggest that HR expectations are changing in order to shape the effective work culture.

The basic objective of the research is to understand the innovative ideas and current trends in HR domain and understand the benefits of these current trends. As a result of this research following trends are identified; globalization and its implications, workforce diversity, corporate downsizing, employee involvement, family and work life balance, changing skills requirement employee expectations.

There are some innovative roles of HR, which are operated from HR department like; Artificial intelligence (AI) in the workplace, investing in nutrition to boost workplace health and wellness Focus on mental health Improving employee performance.

Keywords: - *Workforce diversity, Current trends and Innovative ideas in HR Management.*

Aims of the study:-

1. *The main purpose of this research paper is to understand the recent & innovative trends in HRM.*
2. *To study HRM and understand how HR department is dealing with changing nature of work.*

1. Introduction

Human Resource Management is the process of acquiring suitable people in order to fulfill the needs of organizations. HRM has been evolving over the past decade and gone through the major drastic transformation in structure and operations largely within last two decade. The responsibility of HR manager has been changed drastically in recent few years.

The application of Information technology in administration processes can cause the social and environmental innovation; the organization must understand and learn how to direct their resources to develop the organization. Experts in the field of HR have pointed that human resource education is very important for successful implementation of innovation.

The current focus should be on technology. Technologies to find people, connect people, engage people, enhance learning and even replace people. For years, technology has acted as a tool to help with day-to-day tasks, but the recent focus will be 'technology as a way of life in the workplace'.

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The purpose of this paper is to understand and investigate of emerging trends in the process of innovative human resource management. For the research purpose theoretical methods are utilized such as case studies, articles, research papers published in reputed journals

2. HRM & Innovative practices:-

Human resource is one of the active factors of production through which human resource can generate the different ideas and vision for the organizations and we can turn these ideas and visions into reality. By doing this we as an organization can compete with different types of organizations in the marketplace.

HR professionals need to understand the importance of innovations and mandate by attracting and keeping the most innovative people, constantly improving their skills and creating innovative culture within organization [1].

There are several new innovative practices in HR are improving the people agenda impacting culture and employee wellbeing.

1. An annual survey and feedback action program:-

An annual survey and feedback program is unique initiative which is followed by many organization in order to create the transparency in organizational culture. A Constructive and valuable feedback is required for the performers in order to understand the actual level of performance and improvement of the performance in order to understand the gap between performance standard and actual performance.

This kind of initiatives will allow discussing the different problems assessment and resolution opportunities, which can have impressive results. [2]

2. Transparency and ability to share its story:-

There are some organizations are sharing their history and status with its entire staff, discussing the high and low, challenges and successes with every person. These organizations are keeping an open mind in HR processes and welcomes changes and innovation when needed. Their open mind is keeping them ahead of the rest.

3. Effective Employee engagement:-

Some organizations are staffing supportive managers, improving colleague relations, promoting a stress-free work environment, and promoting philanthropy through outreach activities as a pert of effective employee engagement (EEE). They believe in vocational education for its entry-level employees, offering room to move upward over time.

Employees who are engaged in their work and committed to their organizations give companies crucial competitive advantages—including higher productivity and lower employee turnover. [3]

4. High-End customer service:-

Nowadays employees are trained to supply the best customer service the industry has seen, to reward its employees for their hard work and dedication, the company offers annual bonuses

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equaling up to four weeks of earnings. Financial remuneration is also given for personal education and health and wellness efforts. Organizations are setting the standard for creating happy employees, and as a result, employee loyalty is at an all time high.

5. Mentorships to improve the rate of success:-

Mentorship in the organization leads to create high performing culture, which translates to the company's geographical success. The HR team takes a focused interest in new employees by offering mentorships to improve the rate of success. New team members are valued and well-trained for advancement. The HR team are now busy in a routine standard of paying its interns a lucrative wage. At the end of the internship, job offers are made. The consistent means of hiring interns and fitting them into full-time employment status adds value to the company and eliminates the price of training. This is a new and improved HR trend pioneered by various organizations.

Mentoring is about two people who have got to each other to help to each other to go forward in the work progress to perform their work more easily and to organize their life. [4]

6. Work and life balance

Work and Life are the two most important domain of the employed individual, however there is big challenge for employee to maintain the balance between these two domains. The importance of managing employee's work-life balance has increased over the last 20 years. [5]

The key to success of organization is their human resource efforts to bring a work and life balance. In which encourages employees to balance their work and personal life. HR department is focusing on balancing work and families. Many of the employees sandwiched between childcare, eldercare and family for elderly parents are offered extensive services. Nursing home placement, home health services, and support groups are part of the innovative ways to eliminate the stress of employees.

7. Artificial intelligence:

Artificial intelligence is a field of computer science that aims to solve computer problems which hare associated with the human intelligence. In other words, AI enables machines to "think like humans," and perform tasks such as learning, problem-solving, reasoning, and language processing. Today, AI is being driven by two fundamental technologies – machine learning and deep learning

Key use cases in machine learning in the HR context; Background verification, Employee attrition, content personalization etc. McKinsey's latest forecast of AI's impact on the global economy is that AI will generate $13 trillion in global economic activity by 2030. The HR professionals today are focusing to optimize the combination of human and automated work to gain a simple, seamless, and intuitive work environment. It provides them time for creativity, intelligence, and empathy to deliver an enhanced candidate and employee experience.

8. Mental health Improving employee performance:-

Mental health is growing importance to many organizations and HR plays an important role where HR should follow some steps in order to improve the psychological health and wellbeing outcomes proactively.

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Resilient and healthy businesses need healthy and resilient employees and there is an increasing awareness of the need to educate, identify and support employees with mental health problems

3. Emerging trends in Human Resource Management

1. Corporate downsizing:-

Nowadays companies are taking tough calls by following the professional and practical approach. Corporate downsizing is very common in various companies. It is a strategic business move to cut operational costs, maximize production, and increase profit.

In this process HR team needs to play a crucial role while executing the stress free downsizing within organization. While downsizing HR people need to understand the various thinks like; workload, productivity, internal departmental functions and the individual outputs.

HR department should explore the alternate workforce reduction method before setting on corporate downsizing. They can use another ways like; Voluntary layoffs, early retirement, pay reduction etc.

2. Globalization and Its implications:-

Attracting global talent requires implementation of new strategies for finding and attracting new talent. The HR department needs to ensure that the appropriate mix of employees in term of knowledge, skills and cultural adaptability is available to handle global assignment. In order to achieve these objectives organization must train the individual to meet the challenges of globalization.

3. Skills requirement:-

Skills shortages transferred into losses for the organization in terms of poor quality work and low productivity, Increase accidents and customer complaints, so the growing requirement of opportunities requires improvement in skills which leads to increase the performance.

In this HR department play an important role by sharing and informing educators about the changing required skills for the specific job.

4. Workforce Diversity:-

Workforce Diversity is the process of bringing together of a variety of people to one workplace. It means similarities and differences among employees in terms of age, cultural background and physical abilities and disabilities, race, religion, gender and sexual orientation. Society had discriminated on these aspects for centuries. Diversified workforce is necessary to deal critical issues and challenges of management.

5. Continuous Improvement process:

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Sometime it is called Continuous Improvement program, it is improvement of product, services and processes through incremental and breakthrough improvement. In order to execute this process PDCA Plan, Do, Check, Act cycle is mostly utilized by the organization which leads to continuous rectification of problems and errors. HR department is responsible for the smooth execution of the process and produce the result.

6. Recruitment Chatbots:-

The important and real innovation in this space is t he use of AI Artificial Intelligence in recruitment. Recruitment chatbots mimic human conversational abilities during the recruitment process. Cahtbots are helping recruiters focus on other administrative task, asking screen questions, answering FAQs and streamlining the process.

7. Gamification

Gamification is creeping into all elements of HR, from the interview process to learning and development. Companies such as Accenture and Deloitte are already devotees, using tools to set lifelike workplace challenges in the recruitment stage and beyond. Elsewhere, Google apparently gives its staff an allowance for each work trip.

If the allowance isn't spent, they can add the remaining balance to their wage or give it to charity. The company reported 100% compliance within six months using this gamification technique.

4. Literature review:-

"Innovative and current trends in HRM" the current research is mainly focusing on different areas of Human Resource, such as development and engagement. In this research my focus is on engagement and development of human resource through the innovative approaches which may leads to the growth of individual and the organization.

Some of the important areas highlighted in this research which are as follows;

An annual survey and feedback action program, Transparency and ability to share its story, Effective Employee engagement, High-End customer service, Mentorships to improve the rate of success, Work and life balance, Artificial intelligence, Mental health Improving employee performance, Corporate downsizing, Globalization and Its implications, Skills requirement, Workforce Diversity, Continuous Improvement process.

Some research papers, articles, books and websites that has been referred in this survey in order to get the proper theme and status about the concept of innovation in the field of HRM and which new trend are coming up in order to develop human resources. As a summary of the research I have observed some important ideas that lead to the growth of human resource domain.

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A per my observation in the field of human resource there are so many researchers focused on new approaches but no one suggested any strategy or technique how to implement that particular idea.

In this research paper organization or any educational institute will get the idea about the benefits of these initiatives.

5. Conclusions:-

Indian economy is growing very fast by adding different changes and innovative practices in the business world and the business world is changing very rapidly. There are many organizations are adding new processes and discarding old or traditional processes and mechanism. In order to sustain in the competitive world they have to keep updated regularly as far as their system and work culture is concern.

In order to create and implement innovative trends and culture theu have to provide developmental opportunities for their employees, which may help them to think out of the box.

Organizations need to understand how to deal with ageing workforce they must attract, integrate and maintain these kind of workforce, that workforce can be converted into valuable human capital.

As a human resource department need to understand the changing requirement of the organizations and make those factors available in order to compete with business world.

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Enablers and Inhibitors of Industry 4.0 with special reference to Auto Ancillary Industry based in Pune Region.

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Abstract

Purpose: Advanced automation technologies are set to transform organizational performance in the next few years, a transformation process is referred as the Forth Industrial Revolution or Industry 4.0 or Industrial Internet of Things (IIoT), or Smart Manufacturing. Industry leaders and experts acknowledged the fact that these technologies pertaining to industry 4.0. is set to convert typical people controlled processes to seamless integrated process and in turn will revamp the old factories into digital enterprises in next few days to come which will create new opportunities for both discrete and process industries to fulfil their customers' individual requirements. However it is observed that the only select few organization have plant-wide adopted the bouquet of technologies of Industry 4.0 and reaping the benefits and majority of the organizations have kept the adoption plan only on the paper and necessary action is not yet initiated.

Approach: This paper highlights the analysis of the data collected from the 37 executives representing auto ancillary industry based in Pune region. The respondents were selected on the basis of convenient sampling. These executives were asked certain questions to select the parameters which is enables them to adoption of technologies of Industry 4.0 also the inhibitors for adoption of technologies pertaining to Industry 4.0

Findings: The results indicated that certain parameters across the firms were clearly stands out as enablers such innovation driven organizational culture and organizational focus on quality improvement were the major enabler from the organizational culture perspective and a poor overall equipment efficiency of existing setup and availability of digital tools were the major enabler from the operations perspective for adoption of Industry 4.0 however, employees resistance to change and employees existing skill-set were inhibitors from the HR perspective and higher capital expenditure and return on investment in technology up-gradation were dominant hurdles from the finance perspective were the major inhibitors of adoption of Industry 4.0

Originality: This paper attempts to identify the motivational factors and roadblocks for the adoption of technologies pertaining to Industry 4.0 for Pune based auto-ancillary firms. Total 11 factors have been identified to understand the perception of the respondents in order to determine the enablers and inhibitors for Industry 4.0

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***Keywords**: Organizational Performance, Enablers of Industry 4.0, Inhibitors of Industry 4.0, Technology Adoption, Auto Ancillary Industry*

1. Introduction

Industry 4.0 makes a factory smart by applying advanced information and communication system and future oriented technologies. Adopting forth industrial revolution is a cost-intensive exercise, and is met with disinclination from several manufacturers. Many manufacturers dilemma as to whether they can entrust into Industry 4.0 considering the huge investments required and lucrative however un-perceived benefits.
The term Industry 4.0 was first used at the Hannover Messe Fair in year 2011 and is meant to describe the upcoming wave of industrial revolution. Professor Wolfgang Wahlster, Director and CEO of the German Research Center for Artificial Intelligence (AI), addressed during the opening ceremony. The context of the term usage was how companies can be successful in a high wage region with global competition. He also suggested that the organizations must be in a shape for the Industry 4.0 being driven by the Internet. Hence in a nutshell the term "Industie 4.0"describes how the Internet of Things (IoT) is being implemented into our existing production models.

The Industry 4.0 'execution system' is therefore based on the connections of Cyber-Physical Systems (CPS) building blocks. These blocks are embedded systems with decentralized control and advanced connectivity that are collecting and exchanging real-time information with the goal of identifying, locating, tracking, monitoring and optimizing the production processes. A firm pertaining to auto-ancillary industry is the supplier of quality products to OEM in order to support OEM on their core competencies.

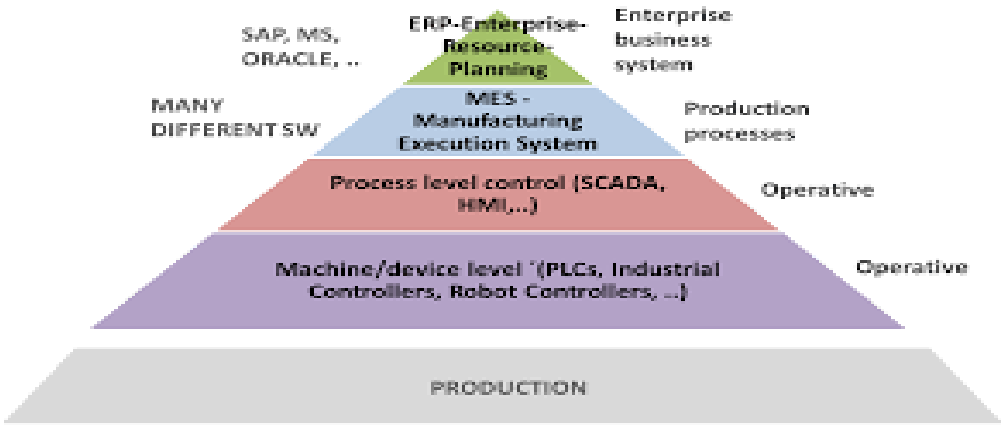

Diagram 1.1 Pyramid structure of support software of modern production system. (Adopted from DoI:https://online-journals.org/index.php/i-jim/article/view/7072, Andreja Rojko)

In order to determine the level it is essential to understand the level of adoption of Industry 4.0 in the organizations in auto ancillary industry and what are the enablers and hurdles of industry 4.0.

2. LITERATURE REVIEW

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Google search engine fetches 25, 40, 00,000 results of Industry 4.0 and is trending since year 2012. Industry 4.0 is a name for the current trend of automation and data exchange in manufacturing technologies.
The transformation in production and automation was brought on first by steam and water power (Industry 1.0), then by electrification (2.0), and more recently by the digital computer (3.0). Industry 4.0, digitization. (PWC, 2017)

In third industrial revolution computers were inter-connected to enable the human capital to take informed decision however, in Industry 4.0 because of Internet of systems which create network of machines inter –connected can make a decision without the involvement of human being and hence making smart factory a reality. What is Industry 4.0? Here's A Super Easy Explanation For Anyone (Bernard Marr, 2018)

The term "smart manufacturing" has come to categorize IoT in the United States. Ethernet cables, human machine interfaces, and wireless communications are now being used in automation and to construct smart cities and factories. Carlos Gonzalez, Content Director Machine Design (2016)
Three core objective of the industry 4.0 is digitization and integration of entire value chains, digitization of services and products offerings and digital business models & customer access (Deloitte, 2017)

A projection made by the corporate consultancy McKinsey arrived at the figure of over 11 trillion dollars per annum, in additional growth through year 2025. However, this calculation assumes a price for rare elements, essential for many IoT components, that is already very low from an ecological perspective, and the study further assumes that the prices for other essential components such as micro-electromechanical sensors will sink by 30 to 70% (Sabine Pfeiffer, 2017)

The following six dimensions were strategy and organization (investments, innovations management), Smart factory (equipment and IT systems, data capturing and usage, digital modeling), Smart operation (integration of value chain, cloud storage), Smart products (physical components, virtual identity), Data-driven services (ICT functionalities, prediction and optimization of business outcomes), Human resources (employees skills, continuous education). ('Verband Deutscher Maschinen- und Anlagenbau' Survey 2017)

There are two approaches in a typical manufacturing organisation around the globe which are focused on improving organizational productivity. First is the conventional lean manufacturing proposed by Toyota Motor Corporation in early 1990 which is then widely accepted by the eastern part of the world and are typically labour intensive economies. The underline principle of lean is customer value focused method of manufacturing to ensure the decrease in the waste and in turn increase in the productivity. Second approach of the western world has always been a focus on an automation and use of technology to improve the productivity. (Piercy and Rich, 2009)

Financial performance study concludes that during the period of inferior performance, the firms had to make some kind of transformations strategies to optimize the costs to ensure better performance. (Kosaet. al. 1992),

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Every year almost 1.3 crore workforce joins the industry however after the reforms in the economy 1991 major portion of gross domestic product was went invested into the fiscal deficit of the government and capital investment required to set up production facilities was missed. Why India missed out on the industrial revolution and might miss it again (Vivek Kaul 2015)

Industry 4.0 firms could result in decrease of production costs by 10-30%, logistic costs by 10-30%, and quality management costs by 10-20%. Industry 4.0 factories could result in increase of (1) a shorter time-to-market for the new products, (2) an improved customer responsiveness, (3) enabling a custom mass production without significantly increasing overall production costs, (4) more flexible and friendlier working environment, and (5) more efficient use of natural resources and energy. Andreja Rojko (2017)

In few of the organizations, advanced digital technology pertaining to Industry 4.0, the transformation of production will not only in terms of greater efficiency but also lowest possible cost which will dramatically change the traditional SCM relationships i.e. relationships among producers, suppliers, and customers. It will also significantly change the relation between human and machine. The next manufacturing revolution is here (Oliver Scalabre 2016)

Pyramid structure of support software of modern production system. Starts with machine level, process level, manufacturing execution system to enterprise business level. The problems such as database integration and communication protocols need to be resolved Reference Architecture Model for Industry 4.0 was developed in Germany. The three-dimensional RAMI4.0 should enable identification of the existing standards, identification and closure of gaps and loopholes in the existing standards, identification of overlaps in the existing standards. Andreja Rojko (2017)

Fourth industrial revolution would convert the physical enterprise into the digital enterprise which means SMART & connected technologies will become intrinsic part of any organization. Forces of change Industry 4.0, Brenna Sniderman, Mark Cotteleer (2017)

A survey was conducted of 268 companies from Germany with more than 20 employees; the results showed that 56.5% of all participating companies are not fulfilling any requirements concerning Industry 4.0 readiness. Further, 20.1% of the companies are assessed to be on the Level 1 (beginner), which means that the company is involved in Industry 4.0 through pilot initiatives in various departments and investments. This is however limited to a single area and only few processes are already supported by IT systems. Only 0.3% of companies (8 companies from 268 that were participating) are ranked on the Level 5 (top performer). Adopted from Industry 4.0 Concept: Background and Overview (International Journal of Interactive Mobile Technologies (iJIM) Andreja Rojko (2017)

3. RESEARCH METHODOLOGY

1.1 RESERARCH OBJECTIVES:

3.1.1. To identify the enablers for implementation of Industry 4.0 with special reference to the auto ancillary industry based in Pune region.

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3.1.2. To identify the inhibitors for the implementation of Industry 4.0 with special reference to the auto ancillary industry based in Pune region.

1.2 HTPOTHESIS:

Ho1= There is no enabling factor with the firms representing auto ancillary industry for the implementation of Industry 4.0

Ha1= There are substantial enabling factors with the firms representing auto ancillary industry for the implementation of Industry 4.0

Ho2= There are no hurdles for the firms representing auto ancillary industry for the implementation of Industry 4.0

Ha2= There are hurdles for the firms representing auto ancillary industry for the implementation of Industry 4.0

1.3 DATA COLLECTION METHODS:

1. Secondary data was collected from the available secondary resources and analysed systematically in order to define the scope of primary research.
2. Data collection instrument used was a structured questionnaire and the data was collected from a taking a personal interview.

1.4 SAMPLING:

1. The sampling method used was a non-probability sampling method, convenience sampling and snow ball sampling.
2. Sample size was 37.

1.5 DATA ANALYSIS

Data was coded and analysed with Microsoft Excel 2016

1.6 LIMITATION:

1. The research attempts to analyse the perceptions of the respondents towards enablers and inhibitors for upcoming advanced automation technologies pertaining to Industry 4.0
2. The geographical scope for data collection was organizations from the auto ancillary industry from Pune, Maharashtra.

4. DATA ANALYSIS

Gender	Respondents	Percentage
Male	33	84.61
Female	6	15.38
Total	39	100

Table 4.1

Inference from the data: 84.61 % respondents were Male, while 15.38% were female respondents.

Age Group (in years)	Respondents	Percentage
24-38	32	82.05
39-53	7	17.94
Total	39	100

Table 4.2 Age group of the respondents

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Inference from the data: 82.05% respondents belongs to age group of 24 years to 38 years, i.e. Generation Z however 17.94% respondents belongs to age group of 39 years to 52 years i.e. Generation Y.

In which Hierarchical level you are currently working?	Respondents Level in Hierarchy	Percentage
CxO	1	2.56
Entry Level	7	17.95
Middle	20	51.28
Operational	2	5.13
Supervisory	5	12.82
Top Management	4	10.26
Total	39	100.00

Table 4.3 Respondents level in organizational hierarchy

Inference from the data: Total 70 % respondents were working in the entry and middle level management cadre. Of which 51.28% respondents were working in the middle management level, followed by entry level managers i.e. 17.95 %

Total Work Experience	No. of respondents	Percentage
0- 3 years	5	12.82
3-5 years	9	23.08
5-10 years	15	38.46
10- 20 years	7	17.95
20 Years and above	3	7.69
Total	39	100.00

Table 4.4 Total work experience of the respondents

Inference from the data: 15 respondents i.e. 38.46% were having the total work experience of in the range of 5-10 years. Followed by 9 respondents accounting to 23.08% were having the total experience in the range of 3 years to 5 years and 9 respondents accounting to 17.95 % were having the total experience in the range of 10 years to 20 years, 5 respondents were having the total work experience of less than 3 years.

How long you are working with the current organization?	Number of respondents	Percentage
Less than 1 year	3	7.69
1-3 Year	18	46.15
3-5 Year	9	23.08
5 Years or More	9	23.08
Total	39	100.00

Table 4.5 Work experience of the respondents in current organization.

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Inference from the data: 46.16% respondents were working the same organization for the since last 5 years, 53.84% respondents has a work experience of less than 3 years with the current organization of which 3 respondents have recently joined the current organization.

Current organization is multinational in nature?	Respondents	Percentage
No	12	30.77
Yes	27	69.23
Total	39	100

Table 4.6 Existing organization multinational in nature.

Inference from the data: 69.23% respondents belong to multinational organization however 30.77% respondents belong to domestic organization.

Who is the decision maker for the implementation of Industry 4.0 in your organization?	No. of Respondents	Percentage
Department Head	4	10.26
Promoter	2	5.13
Technology Department Head	10	25.64
Top Management	23	58.97
Total	39	100.00

Table 4.7 Decision maker for implementing Industry 4.0

Inference from the data: 58.97% respondents responded that top management is the decision maker for implementation of industry 4.0 however 25.64% respondents admits that Head of technology department is the decision maker for implementation for Industry 4.0

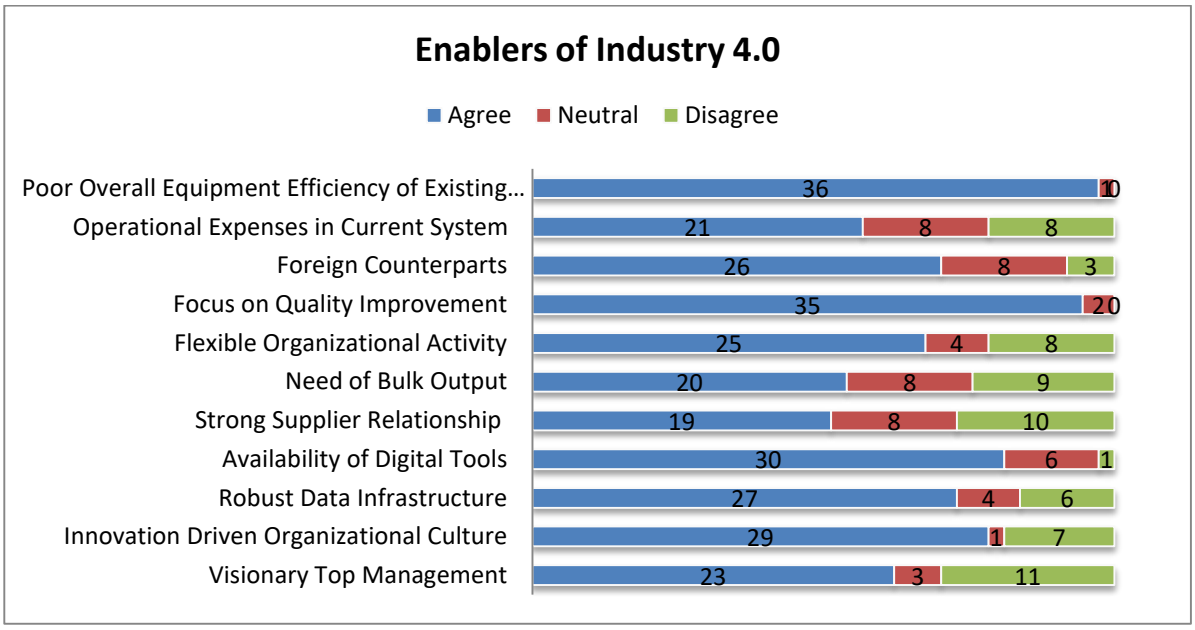

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Chart 4.8 Enablers of Industry 4.0

Inference from the data:

I. 58.97 % respondents agree that the top management of the organization is visionary to implement Industry 4.0 and 74.36 % respondents agrees that their organization has a innovation driven culture which shall drive industry 4.0 transformation
II. 69.23% respondents agree that the existing data infrastructure to support industry 4.0 and 76.92% respondents agree to the point that the digital tools are available to implement industry 4.0
III. 48.72% respondents agree that they have strong supplier relationship in order to implement industry 4.0 and 54.05% respondents agree that need of bulk output is an enabler for Industry 4.0
IV. 64.10% respondents agree that flexibility in organizational activity is an enabler for industry 4.0 and 89.74% respondents agree that organizational focus on quality improvement enables the adoption of industry 4.0
V. 66.67% respondents agree that a foreign counterpart supports the adoption of industry 4.0 and 53.85% respondents agree that operational expenses in the existing system are high which will lead to adoption of industry 4.0 also 94.87 % respondents agree that poor overall equipment efficiency (OEE) lead to adoption of industry 4.0

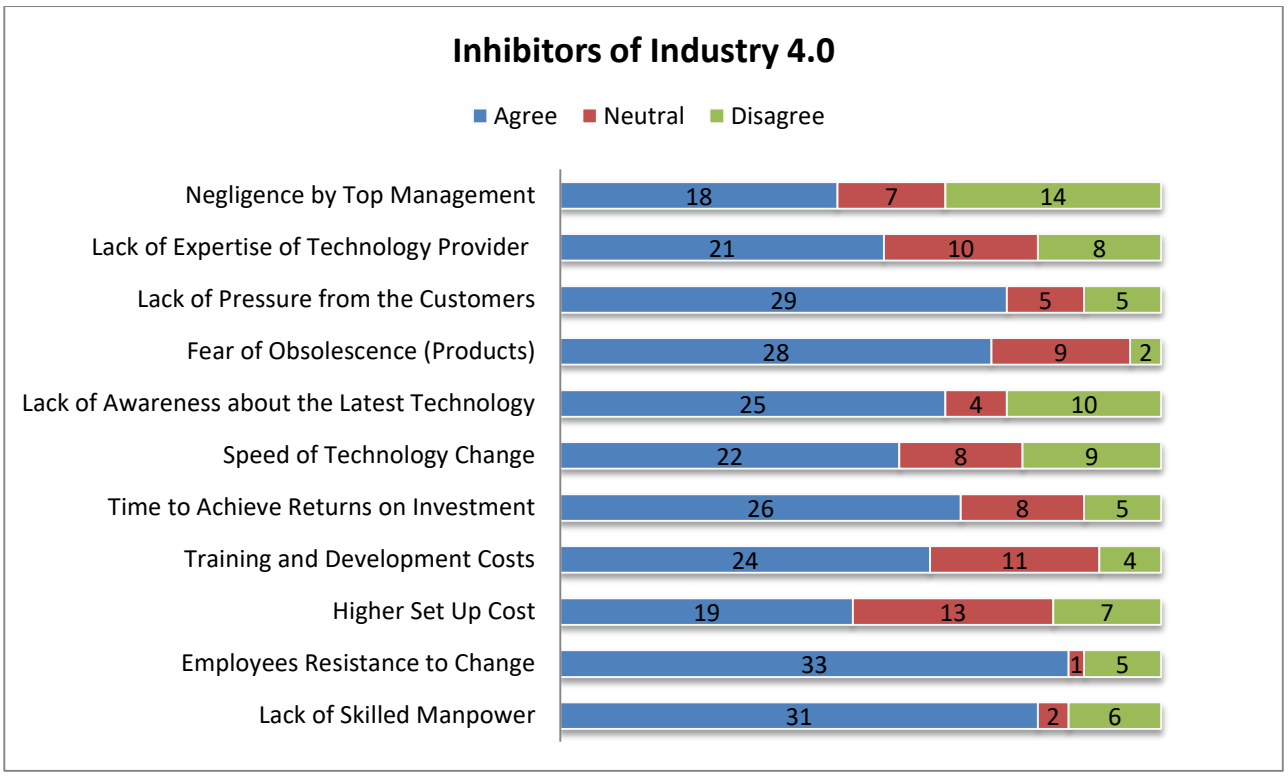

Chart 4.9 Inhibitors of Industry 4.0

Inference from the data:

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I. 79.49 % respondents agree that the lack of skilled manpower is a hurdle to implement Industry 4.0 and 84.62 % respondents agrees that employees resistance to change act as an inhibitor for industry 4.0 transformation
II. 48.72 % respondents agree that the higher set up cost is a hurdle for Industry 4.0 adoption and 61.42% respondents agree to the point that the higher training and development costs would be hurdle to implement industry 4.0
III. 66.67 % respondents agree that they time to achieve return in investment is a hurdle in order to implement industry 4.0 and 56.41 % respondents agree that speed of technology change is a hurdle for adoption of Industry 4.0
IV. 64.10% respondents agree that lack of awareness about the latest technology is an inhibitor for Industry 4.0 and 71.79 % respondents agree that fear of obsolescence of products is a hurdle for the adoption of Industry 4.0
V. 74.36 % respondents agree that lack of pressure from the customers is a hurdle for the adoption of Industry 4.0 and 53.85% respondents agree that lack of expertise of technology provider is a hurdle for adoption of Industry 4.0 also 46.15% respondents agree that negligence by top management is an inhibitor for industry 4.0

5. FINDINGS

I. From the data it proves that the alternative hypothesis
Ha1= There are substantial enabling factors with the firms representing auto ancillary industry for the implementation of Industry 4.0 is accepted.
II. From the data it proves that the alternative hypothesis
Ha2= There are hurdles for the firms representing auto ancillary industry for the implementation of Industry 4.0
III. 94.87 % respondents agree that poor overall equipment efficiency (OEE) lead to adoption of Industry 4.0
IV. 84.62 % respondents agree that employee's resistance to change act as an inhibitor for Industry 4.0 transformation
V. 58.97% respondents responded that top management is the decision maker for implementation of industry 4.0 however 25.64% respondents admits that Head of technology department is the decision maker for implementation for Industry 4.0

6. SUGGESTIONS

I. Lack of awareness about the automation technologies and potential of transformation with the full fledge adoption of technology is a major concern, hence top management should proactively carry the competency mapping and approach to the potential individuals and encourage to develop organizational knowledge about Industry 4.0 through trainings, management development programs, appointment of expert/consultant, industrial sabbatical etc.
II. Employees resistance to change is mainly because of fear of job loss, skills development etc is to be handled carefully as without the involvement of the employees and taking them into confidence the organization will not sustain.
III. Top management must make a provision of managing funds for capital expenses for adoption of all the applicable tools and techniques of Industry 4.0 which can be recovered in the shorter period of time however negligence to do so will result in competitive parity in the upcoming context of digital enterprises.

7. CONCLUSIONS

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During the research process it was observed that the respondents representing auto ancillary industry perceives that, advanced automation technologies has potential to increase the organizational performance dramatically, and even the organizations have effectively implemented few of the technologies from the shop level to organization wide level. However, because of major hurdles in the adoption of technologies organizations are procrastinating the complete adoption and implementation of advanced automation technologies enabling the Industrial Internet of Things. To remain competitive in terms of delivering high quality product and/or services at affordable cost organizations should create the strategic plan to automate the operations as early as possible.

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